

**AN ULTRASONIC SURGICAL INSTRUMENT INCORPORATING FLUID
MANAGEMENT**

Abstract of the Invention

Disclosed is an ultrasonic surgical device having a distally/proximally movable fluid management system consisting of single lumen or multiple lumens.. The invention provides for the delivery of irrigation fluid or the removal of fluid, debris or vapor from the tissue-affecting portion of the blade while minimizing the loading on the blade. The blades of the surgical device, when excited at a natural blade system frequency, will have modal shapes characterized by longitudinal, transverse and / or torsional motion and will have nodal locations for these motions at positions along the tissue affecting length of the blade. The instrument is designed to allow for the fluid management system to be positioned at one or more motion nodes to facilitate efficient removal of tissue or fluid, which tends to accumulate at such nodes of the ultrasonic surgical blades.